

# PROPERTY PLANNING COMMON ELEMENTS

## COMPONENTS OF MASTER PLANS

### HABITATS AND THEIR MANAGEMENT

#### Remnant Prairie

##### *Description*

“Prairie” refers to a collection of native grassland communities that are sub-divided into six types. Prairies occur mostly in the southern and western parts of the state and can be found on a variety of topographies, soil types, and moisture regimes. They are dominated by grasses, sedges, and forbs and characterized by lack of trees and tall shrubs. Historically, prairies were maintained by frequent fires (either of natural origin or started by Native Americans). On most soil types and moisture regimes in Wisconsin’s climate, prairies will succeed to woody species over time in the absence of fire, mowing, herbicide application, or grazing. Native prairies are comprised of the following sub-types:

##### Dry Prairie

A dry grassland community typically occurring on steep south- or west-facing slopes at or near the summit of river bluffs with sandstone or dolomite bedrock near the surface. This type is better represented than any other native prairie type in Wisconsin because it occurs on sites not well suited to other uses. Dominant species are short to medium-height prairie grasses such as little bluestem, side-oats grama, hairy grama, and prairie dropseed. Common forbs are lead plant, silky aster, flowering spurge, purple prairie-clover, cylindrical blazing-star, and gray goldenrod.

##### Dry-mesic Prairie

Historically common in parts of southern Wisconsin, this type is rare today due to conversion to agriculture or woody encroachment from lack of fire. It occurs in slightly less droughty sites than Dry Prairie, on soils that are somewhat sandy (loamy sands or sandy loams). Dry-mesic prairie contains many of the same grasses as Dry Prairie but is dominated by taller species such as big bluestem and Indian grass. Needle grass and prairie dropseed may also be present. The herb component is more diverse, with composites and legumes particularly well represented in undisturbed stands.

##### Mesic Prairie

This type, also called tallgrass prairie, was historically common but is now extremely rare. It occurs on rich, moist, well-drained sites, typically on level or gently rolling glacial topography. Big bluestem is the dominant species, with little bluestem, Indian grass, needle grass, prairie dropseed, and switch grass also common. The forb layer is very diverse. Common taxa/species include the prairie docks, lead plant, heath and smooth asters, prairie coreopsis, prairie sunflower, rattlesnake-master, flowering spurge, bee-balm, prairie coneflower, and spiderwort.

##### Sand Prairie

This dry grassland community may have occurred historically in extensive stands on broad sand terraces bordering the Mississippi, Wisconsin, Black, and Chippewa Rivers. It is dominated by grasses such as little bluestem, June grass, panic grass, and poverty-oat grass. Common herbaceous associates include sand cress, field sage-wort, western ragweed, several sedges, flowering spurge, frostweed, round-headed bush-clover, western sunflower,



false-heather, long-beard hawkweed, stiff goldenrod, horsebalm, and spiderwort. Drought-adapted fungi, lichens, and mosses are significant components of Sand Prairie communities.

#### Wet Prairie

This tall grassland community shares characteristics of prairies, sedge meadows, fens, and emergent marshes. Its wetland-like character means that sometimes very few obligate prairie species are present. Dominant grasses may include Canada bluejoint grass, prairie cordgrass, marsh wild-timothy, and several sedges (lake sedge, water sedge, narrow-leaved woolly sedge). Many of the herbs are found in common with wet-mesic prairie, but the following species are often prevalent: New England aster, swamp thistle, northern bedstraw, yellow star-grass, cowbane, tall meadow-rue, golden Alexander, and mountain-mint.

#### Wet-mesic Prairie

This tall herbaceous grassland community was once common but is now rare. It was most abundant on level or gently rolling glacial moraine or outwash landforms where few natural barriers to fire existed and where fire-dependent communities (mesic prairie, oak opening) dominated the uplands, and sometimes occurred in large wetland complexes with wet prairie, sedge meadow, fen, and emergent marsh. It is dominated by tall grasses including big bluestem, Canada bluejoint grass, cordgrass, and Canada wild-rye. A diverse forb component includes azure aster, Eastern shooting-star, saw-tooth sunflower, prairie blazing-star, prairie phlox, prairie coneflower, prairie docks, late and stiff goldenrods, and Culver's-root.

#### ***Ecological Landscape Opportunities***

Ecological Landscape	Opportunity*					
	Dry Prairie	Dry-mesic Prairie	Mesic Prairie	Sand Prairie	Wet Prairie	Wet-mesic Prairie
Central Lake Michigan Coastal				P		
Central Sand Hills	I	P	P	I	I	M
Central Sand Plains	I	I	P	M	P	P
Northwest Sands				P		
Southeast Glacial Plains	M	M	M	P	M	M
Southern Lake Michigan Coastal		P	I		I	M
Southwest Savanna	M	M	M	P	P	I
Western Coulee and Ridges	M	M	I	M	P	I
Western Prairie	I	I	M	I	P	

M = Major: major opportunity exists in this Landscape; many significant occurrences are recorded or restorations likely to be successful.

I = Important: several occurrences important to maintaining the community in the state occur in this Landscape.

P = Present: community is present in the Landscape, but better opportunities exist elsewhere.

#### ***Rare Species***

Many Species of Greatest Conservation Need (SGCN) are associated with native prairie habitats based on the findings in [Wisconsin's 2015 Wildlife Action Plan](#). To learn more, visit the [Grassland communities page](#) and click on a prairie type.

#### ***Threats***

- Conversion to agriculture or development can destroy and/or fragment native grasslands.



- Excessive consumption or trampling by grazers can destroy plants and compact soil, leading to erosion and loss of grassland sod.
- Off-road vehicles can destroy fragile vegetation, lichens, and biological soil crust associated with sand prairie.
- Native grasslands historically were maintained by fire and are threatened by the lack of it. Fire limits woody encroachment, stimulates early and robust growth of plants as well as flowering and fruit production, deters growth of invasive species, and increases plant species diversity.
- Native grasslands are threatened by a variety of non-native invasive plants, including smooth brome, wild parsnip, sweet clovers, common buckthorn, and Eurasian bush honeysuckles. Some aggressive native woody species (e.g., gray dogwood) can also be a problem.
- Changes in hydrology (draining; ditching; filling; flooding; adjacent development; overuse of groundwater) can destroy or degrade wet and wet-mesic prairies.
- Excess nutrients and sedimentation from adjacent land uses (e.g., agricultural fields; lawns; road crossings, etc.) can destroy or degrade wet and wet-mesic prairie.
- Climate change projections indicate that native grasslands, particularly mesic prairie, may face increased threats of woody invasion and non-native invasive species and possibly a narrowing of opportunities to apply prescribed fire.

### ***Management Techniques***

- Prescribed fire
- Mowing/brushing and haying
- Pesticide treatments
- Grazing

### ***Management Prescriptions***

- Wherever possible, manage native grasslands within a complex of interconnected, related habitats (e.g., surrogate grasslands, oak barrens or savanna, sedge meadow, emergent marsh, etc.), preferably with a lowland-to-upland continuum.
- Strive to enlarge and connect disjunct prairie patches.
- Where possible, use prescribed fire to invigorate native grasses and forbs, to suppress the encroachment of woody species, and in some cases to control non-native invasive plants.
- Use grazing, cutting, mowing, brushing and herbicides (when necessary) to remove trees, shrubs, and invasive species. Management should recognize that virtually all grassland species will tolerate a small amount of woody vegetation, and that some scattered shrubs or shrub patches can benefit certain grassland species (e.g., Bell's vireo; brown thrasher; field sparrow).
- Rotate site/patch management spatially and temporally as appropriate to minimize negative impacts from any particular management technique.
- Where possible, remove treelines, hedgerows, fence lines, and other linear features that fragment grasslands, inhibit species movements, and provide hunting perches or movement corridors for predators.



- Follow all applicable [Grassland and Savanna Management protocols](#) to minimize negative impacts of management practices on rare/sensitive species.
- Restore hydrology to wet and wet-mesic sites where feasible. Follow soil and water quality BMPs to minimize impacts to lowland grasslands from excess nutrients and sedimentation.

